

AR 0182

United States Environmental Protection Agency
Region 9

In the Matter of :

Hughes Aircraft Company
City of Tucson
McDonnell Douglas Corporation
Tucson Airport Authority
General Dynamics Corporation

Respondents,

Proceeding under Section 106 of the
Comprehensive Environmental Response,
Compensation, and Liability Act of 1980,
as amended by the Superfund Amendments
and Reauthorization Act of 1986,
(42 U.S.C. §9606)

Order No. 89-03

ADMINISTRATIVE ORDER

I. Jurisdiction

This Order is issued to Hughes Aircraft Company, City of Tucson, McDonnell Douglas Corporation, Tucson Airport Authority and General Dynamics Corporation (Respondents) pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S. C. § 9601 et seq., as amended by the Superfund Amendments and Reauthorization Act of 1986, Pub. L. No. 99-499, 100 Stat. 1613 (1986) ("CERCLA") by authority delegated to the Administrator of the United States Environmental Protection Agency (EPA), and further delegated to the EPA Region 9 Toxics and Waste Management Division Director.

the Administrator of the United States Environmental Protection Agency (EPA), and further delegated to the EPA Region 9 Toxics and Waste Management Division Director.

The Director of the Toxics and Waste Management Division, EPA Region 9, has determined that there may be an imminent and substantial endangerment to the public health, welfare and the environment because of the release and threatened release of hazardous substances from the Tucson International Airport Area Superfund Site located in Pima County Arizona.

This Order directs Respondents to undertake actions that EPA has determined to be necessary to protect the public and the environment from potential endangerment.

II. Findings of Fact

The following facts are a synopsis of information contained in the Administrative Record for EPA's "Record of Decision for Groundwater Remediation North of Los Reales Road" (ROD) signed August 22, 1988. The Record of Decision is incorporated as Appendix A herein.

A. The Tucson International Airport Area is located in Pima County, in southeastern Arizona. The Superfund site includes industrial, commercial, residential and undeveloped areas. Specifically included are the Tucson International Airport, the United States Air Force Plant #44 and part of the San Xavier Indian Reservation.

B. Since the 1940's, several entities disposed or arranged for the disposal of hazardous substances at the site. Hazardous substance disposal included surface discharge of waste liquids to soils on-site. Liquid waste run-off ponded in drainage areas, providing the static pressure for contaminants to infiltrate into the underlying groundwater.

C. The Tucson International Airport Area was listed on the "Expanded Eligibility List", a preliminary National Priorities List (NPL), on July 23, 1982. It was proposed for inclusion on the original NPL on December 30, 1982, attaining final NPL status on September 8, 1983.

D. The remediation of groundwater in the Tucson International Airport Area is being addressed by the United States Air Force and the Environmental Protection Agency. Groundwater contamination south of Los Reales Road is being addressed by the Air Force pursuant to the Department of Defense Installation Restoration Program. Ground-water contamination north of Los Reales Road is being addressed by the EPA pursuant to CERCLA.

E. Groundwater contamination north of Los Reales Road has been found in three discrete areas. The main area (denominated Area A in the EPA Record of Decision) extends north from Los Reales Road more than three and one-half miles to beyond Irvington Road. Area A is generally about three-quarters of a mile wide. For purposes of this order, Area A is hereafter referred to as the "Site". Two smaller areas, believed to be separate from Area A and referred to together as Area B, lie north of the Airport. Area B is not the subject of this action.

F. The groundwater contaminants found at the Site include trichloroethylene (TCE), 1,1-dichloroethylene (DCE), chloroform, and benzene.

G. The City of Tucson currently relies solely upon the groundwater in the Tucson Basin, which includes groundwater at the Site, for its drinking water. The groundwater system in the Tucson Basin has been designated as a Sole Source Aquifer under the federal Safe Drinking Water Act (SDWA).

H. The following paragraphs set out known health effects for certain of the detected hazardous substances:

1. Trichloroethylene is a known animal and suspected human carcinogen. TCE is a solvent which can act as an anesthetic, depressing the central nervous system. It can also cause neurological impairment, liver and kidney damage, and at high concentrations, death.

TCE has been found in groundwater at the Site in concentrations ranging from 0.3 to 409 micrograms per liter (parts per billion or ppb). The Maximum Contaminant Level (MCL) under the Safe Drinking Water Act for TCE in drinking water is 5 ppb.

2. DCE is a possible human carcinogen. Exposure to this chemical may result in liver function abnormalities, headaches, vision problems, weakness, fatigue and neurological sensory disturbances.

DCE has been found in groundwater at the Site in concentrations ranging from 0.3 to 31 parts per billion. The MCL for DCE is 7 parts per billion.

3. Chloroform is a known animal and suspected human carcinogen. It may be mutagenic and cause birth defects. Chloroform can cause liver and kidney damage, headaches, unconsciousness and death.

Chloroform has been found in groundwater at the Site in concentrations ranging from 0.53 to 54 parts per billion. The MCL for total trihalomethanes, of which chloroform is one, is 100 parts per billion.

4. Benzene is a known human carcinogen. Benzene's bone marrow toxicity can result in aplastic anemia, a rapidly fatal disease. Benzene also causes leukemia.

Benzene has been found in groundwater at the Site in concentrations ranging from 1.2 to 14 parts per billion. The MCL for benzene is 5 parts per billion.

III. Conclusions of Law

A. Respondents are "persons" as defined in Section 101(21) of CERCLA, 42 U.S.C. §9601(21).

B. The Tucson International Airport Area is a "facility" as defined in Section 101(9) of CERCLA, 42 U.S.C. §9601(9).

C. The substances identified in Section II of this order are "hazardous substances" as defined in Section 101(14) of CERCLA, 42 U.S.C. §9601(14).

D. The disposal of hazardous substances and the continued migration of those substances in the groundwater and to the groundwater from contaminated soils constitute a "release" and "threatened release" of hazardous substances into the environment as defined in Section 101(22) of CERCLA, 42 U.S.C. §9601(22).

E. Respondents are responsible parties pursuant to Section 107(a) of CERCLA, 42 U.S.C. §9607(a).

IV. Determinations

Based on the Findings of Fact and Conclusions of Law, the Director, Toxics and Waste Management Division, EPA Region 9, has made the following determinations:

A. The release or threatened release of hazardous substances and pollutants or contaminants from the Site may present an imminent and substantial endangerment to the public health, welfare, and the environment. This determination is embodied in the Determination of Imminent and Substantial Endangerment contained in Appendix B attached hereto.

B. In order to prevent or mitigate immediate and significant risk of harm to human health and the environment, immediate action must be undertaken to extract and treat the contaminated groundwater emanating from the Site.

C. The measures required by this Order are consistent with the National Contingency Plan, 40 Code of Federal Regulations, Part 300.

V. Order

Based upon the Findings of Fact, Conclusions of Law and Determinations, Respondents are hereby Ordered to implement the following measures under the direction of EPA.

A. Respondents shall implement the groundwater remedy for the Site specified in the ROD, consistent with the requirements of this Order.

B. Respondents shall design, implement and complete the groundwater remedy in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), as set forth in 50 Fed. Reg. 47912 (1985) (effective February 18, 1986), and all amendments thereto that are effective and applicable to any activity undertaken pursuant to this Order, and also in accordance with the standards, specifications, and schedule of completion set forth in or approved by EPA pursuant to this Order. All work shall be performed by qualified employees, contractors or subcontractors of Respondents in accordance with the schedule in Subparagraph D below. (Except where noted otherwise, all dates referred to in the schedule are calendar days; however, should a deadline fall on a weekend or a Federal holiday, the deadline shall be construed to continue to the next business day.)

C. To implement the remedy, Respondents shall:

1. Design and construct a groundwater extraction system to hydraulically contain the contaminants at the Site so as to keep them from migrating beyond the area of contamination. The Respondents shall ensure by groundwater monitoring that the zone of capture of the extraction wellfield to be designed pursuant to

this Order encompasses the area in which contaminant levels are in excess of the Safe Drinking Water Act MCLs. Respondents shall maintain the zone of capture by creating and maintaining a hydraulic gradient from the edges of the zone of capture to the extraction wells. Respondents shall monitor water levels to ensure that a proper hydraulic gradient is maintained. EPA may require during performance of the remedy that the zone of capture be extended if necessary to control contaminant migration.

2. Design and construct a groundwater treatment system to treat extracted groundwater with packed column aeration to 1.5 parts per billion TCE. Respondents shall demonstrate the treatment system's ability to treat extracted groundwater to at least 1.5 ppb TCE through daily sampling and analysis of the system's effluent. The minimum 1.5 ppb treatment standard for TCE is expected to result in an overall 1×10^{-6} excess cancer risk level for all the chemical contaminants present. However, if Respondents cannot demonstrate to EPA's satisfaction during performance of the remedy that the 1.5 ppb TCE treatment standard results in an overall excess cancer risk of 1×10^{-6} , EPA may require that the treatment standard for TCE be reduced below 1.5 ppb. Air stripping towers shall be equipped with air emission controls as necessary to comply with all "applicable or relevant and appropriate requirements" (ARARs) as identified in the ROD.

3. Operate and maintain the groundwater extraction and treatment system such that chemical contaminant concentrations in groundwater at the Site are reduced to no more than the Safe Drinking Water Act MCLs.

D. Schedule for the Remedy

1. Within 35 calendar days of the effective date of this Order, Respondents shall submit a Draft Field Operations Plan. The Plan shall incorporate at a minimum:

a. a Quality Assurance/Quality Control Plan which shall consist of the following elements:

- 1) project description
- 2) project organization and QA/QC responsibilities
- 3) laboratory contractor requirements and selection
- 4) objectives for measurement data
- 5) field sampling procedures
- 6) laboratory QA/QC including internal audit procedures
- 7) data reduction, validation, assessment and reporting procedures
- 8) internal quality assurance reporting procedures

b. a Worker Health and Safety Plan which shall consist of:

- 1) site history and background information
- 2) source of specifications
- 3) key personnel, responsibilities and administration
- 4) job hazard and risk assessment for work zones
- 5) description of personal protection equipment
- 6) equipment and personnel decontamination procedures
- 7) contaminant migration control procedures

- 8) safe working practices and accident prevention program
 - 9) personnel training requirements and safety meeting schedule
 - 10) medical surveillance programs
 - 11) emergency response plan, medical assistance and first aid equipment
 - 12) communications
- c. a Sampling Plan which shall consist of:
- 1) objectives of the sampling plan
 - 2) sampling locations
 - 3) sampling frequency
 - 4) parameters to be analyzed
 - 5) rationale for specific sampling events

2. EPA shall review and provide comments on the Draft Field Operations Plan.

3. Within 28 calendar days of receipt of EPA's comments on the Draft Field Operations Plan, Respondents shall submit the Final Field Operations Plan. The Final Field Operations Plan shall address all EPA comments resulting from the review of the Draft Field Operations Plan.

4. EPA shall review and approve/disapprove the Final Field Operations Plan.

5. Within 84 calendar days of EPA's approval of the Final Field Operations Plan, Respondents shall submit a Wellfield Data Analysis Report. The report shall incorporate at a minimum:

- a. a summary of new data collected
- b. a compilation of data used to design the wellfield

- c. a description of methods used to analyze the data
- d. results of the analyses
- e. input used in model calibration and execution
- f. a preliminary monitoring plan

6. EPA shall review and approve/disapprove the Wellfield Data Analysis Report.

7. Within 35 calendar days of EPA's approval of the Wellfield Data Analysis Report, Respondents shall submit a Final Wellfield Design. The Design shall consist of bid-ready construction drawings, details, and specifications. The Final Wellfield Design shall address all EPA comments resulting from review of the Wellfield Data Analysis Report.

8. EPA shall review and approve/disapprove the Final Wellfield Design.

9. Within 35 calendar days of EPA's approval of the Final Wellfield Design, Respondents shall submit a Plant, Piping and Equipment (PPE) 30% Design. The PPE 30% Design shall include but not be limited to, the following:

- a. schematic plans and details of the wellfield piping and treatment plant showing all major components
- b. preliminary piping and instrument diagram (P&ID) for the treatment plant
- c. equipment design data
- d. a reporting of design analysis at 90% of completion

10. EPA shall review and approve/disapprove the PPE 30% Design.

11. Within 56 calendar days of EPA's approval of the PPE 30% Design, Respondents shall submit a PPE 70% Design. The PPE 70% Design shall incorporate at a minimum:

- a. plans and details that are 90% complete
- b. P&ID that are 90% complete
- c. Electrical plans that are 50% complete
- d. Instrumentation drawings that are 30% complete
- e. draft specifications
- f. procurement and installation QA/QC procedures outline
- g. complete design analysis
- h. incorporation of EPA comments resulting from review of PPE 30% design.

12. EPA shall review and approve/disapprove the PPE 70% Design.

13. Within 56 calendar days of EPA's approval of the PPE 70% Design, Respondents shall submit the PPE Final Design. The PPE Final Design shall consist of bid-ready construction drawings, details, and specifications. The PPE Final Design shall address all EPA comments resulting from review of the PPE 70% Design.

14. EPA shall review and approve/disapprove the PPE Final Design.

15. Within 280 calendar days of EPA's approval of the PPE Final Design, Respondents shall submit a Draft Start-Up Operating and Maintenance (O & M) and Sampling Plan. The Draft Start-Up O & M and Sampling Plan shall consist of:

- a. a Start-up O & M manual which shall consist of:

- 1) start-up operation strategy
- 2) preparation of start-up
- 3) description of operations
- 4) emergency shut-down sequence and procedures
- 5) equipment maintenance procedures and schedules

b. a Start-up Sampling Plan which shall consist of:

- 1) sample points for plant (influent, effluent air emissions) and wellfield
- 2) sampling frequency
- 3) parameters to be analyzed

16. EPA shall review and provide comments on the Draft Start-Up O & M and Sampling Plan.

17. Within 28 calendar days of receipt of EPA's comments on the Draft Start-up O & M and Sampling Plan, Respondents shall submit the Final Start-up O & M and Sampling Plan, which shall address all EPA comments resulting from review of the Draft Start-up O & M and Sampling Plan.

18. Within 14 calendar days of EPA's approval of the Start-up O & M and Sampling Plan, Respondents shall commence operation of the groundwater extraction and treatment system ("Shakedown Start").

19. Within 105 calendar days of commencing operation of the groundwater extraction and treatment system, Respondents shall submit a Draft Routine O & M and Sampling Plan. The Draft Routine O & M and Sampling Plan shall consist of:

a. a Routine O & M Manual, which shall consist of:

- 1) routine operation strategy

- 2) preparation for routine operation
- 3) description of operation
- 4) emergency shut-down sequence and procedures
- 5) equipment maintenance procedures and schedules

b. a Routine Sampling Plan, which shall consist of:

- 1) sample points for plant effluent and wellfield
- 2) sampling frequency
- 3) parameters to be analyzed

20. EPA shall review and provide comments on the Draft Routine O & M and Sampling Plan.

21. Within 28 calendar days of receipt of EPA's comments on the Draft Routine O & M and Sampling Plan, Respondents shall submit the Final Routine O & M and Sampling Plan, which shall address all EPA comments resulting from review of the Draft Routine O & M and Sampling Plan.

22. EPA shall review and approve/disapprove the Final Routine O & M and Sampling Plan.

23. Within 21 calendar days of EPA approval of the Final Routine O & M and Sampling Plan, Respondents shall start remediation of the groundwater. Respondents shall begin and thereafter maintain routine operation activities in accordance with the approved Final Routine O & M and Sampling Plan until termination of this order by EPA.

E. Respondents shall provide written monthly progress reports. These progress reports shall describe all actions taken to comply with this Order, including a general description of the

remedial activities commenced or completed during the reporting period, remedial activities projected to be commenced or completed during the next reporting period, and any problems that have been encountered or are anticipated by Respondents in commencing or completing the remedy. These progress reports shall be submitted to EPA by the 10th of each month for work done the preceding month and planned for the current month.

F. Respondents shall provide Quality Assurance Reports to EPA on the tenth calendar day of each calendar quarter for the preceding calendar quarter. Quality Assurance Reports shall document Respondents' compliance with the Subparagraph V.I. of this Order and the QA/QC plans submitted pursuant to this Order.

G. Reports, Plans, and Other Items

1. Any reports, plans, specifications (including discharge or emission limits), schedules, appendices, and attachments required or established by this Order are, upon approval by EPA, incorporated into this Order. Any noncompliance with such EPA approved reports, plans, specifications (including discharge or emission limits), schedules, appendices, or attachments shall be considered a violation of this Order subject to penalties in accordance with Paragraph XII of this Order.

2. If EPA disapproves any plans or reports (other than monthly progress reports) or other items required to be submitted to EPA for approval pursuant to this Order, Respondents shall correct any deficiencies and resubmit the plan, report or item for EPA approval within ten (10) working days from the receipt of such disapproval.

3. If Respondents fail to correct the deficiencies in any plan, report or other item required to be submitted to EPA for approval pursuant to this Order, within the ten (10) working days provided for in paragraph V(G)(2) above, the EPA may, at its descretion, develop the required plan, report or item. All such plans, reports, or items shall be incorporated into this Order.

4. Submission of a deficient plan or report is a violation of this Order subject to penalties in accordance with Paragraph XII whether or not resubmission corrects the deficiencies of the original submission.

5. In attempting to correct any deficiency as required by Subparagraph G.2., Respondents shall address all of EPA's comments.

H. The Worker Health and Safety Plan that Respondents are required to submit pursuant to Subparagraph D.1.b. shall satisfy the requirements of 29 C.F.R Part 1910.120 and EPA's Standard Operating Safety Guides.

I. Respondents shall utilize QA/QC procedures in accordance with the QA/QC plans submitted pursuant to this Order, and shall utilize standard EPA chain of custody procedures, as documented in National Enforcement Investigations Center Policies and Procedures Manual, as revised in June 1985, for all sample collection and analysis activities. In order to provide quality assurance and maintain quality control regarding all samples collected pursuant to this Order, Respondents shall:

1. Ensure that all contracts with laboratories utilized by Respondents for analysis of samples taken pursuant to this Order provide for access of EPA personnel and EPA authorized representatives to assure the accuracy of laboratory results related to the remedy.

2. Ensure that laboratories utilized by Respondents for analyses of samples taken pursuant to this Order perform all analyses according to EPA methods or other methods deemed in advance satisfactory by EPA. Accepted EPA methods are documented in the "Contract Lab Program Statement of Work for Inorganic Analysis: and the "Contract Lab Program Statement of Work for Organic Analysis" dated July 1985.

3. Ensure that all laboratories utilized by Respondents for analysis of samples taken pursuant to this Order participate in an EPA or EPA equivalent QA/QC program. As part of the QA/QC program and upon request by EPA, such laboratories shall perform at their expense analyses of samples provided by EPA to demonstrate the quality of each laboratory's data. EPA may provide to each laboratory a maximum of four samples per year per analytical combination (e.g., four aqueous samples for analysis by gas chromatography/mass spectrometry, four soil/sediment samples for analysis by gas chromatography/mass spectrometry).

J. Respondents shall demonstrate their ability to complete the remedy and to pay all claims that arise from the performance of the remedy by obtaining, and presenting to EPA for approval within thirty (30) calendar days after the effective date of this

Order, one of the following items: 1) performance bond; 2) letter of credit; or 3) guarantee by a third party. The appropriate amount of such financial assurance shall be determined by EPA at the time of submission.

K. Any analytical or design data generated or obtained by Respondents that are related to the remedy shall be provided to EPA within seven (7) days of any request by EPA for such data.

L. EPA employees and EPA's authorized representatives shall have the right, upon request, to take splits of any samples obtained by Respondents or anyone acting on Respondents' behalf in the implementation of the remedy. Respondents shall also have the right upon request to obtain splits of samples taken independently by EPA or its authorized representatives.

M. Respondents need not provide EPA with notice prior to sampling relating to the routine operation of the treatment system. Respondents shall, whenever possible, notify EPA seven (7) days in advance of any changes in the routine sampling schedule set forth as part of the Final Routine O & M and Sampling Plan pursuant to Subparagraph D.17. In the event that unexpected conditions make it impossible for Respondents to notify EPA in advance of any changes in the routine sampling schedule, Respondents shall notify EPA within forty-eight (48) hours of the occurrence of any such conditions and shall provide EPA with the results of analysis of such sampling when the results become available. EPA shall be notified (30) days prior to the disposal of any sample collected in an event not specified in the Final

Routine O & M and Sampling Plan, and EPA shall have an opportunity, upon request, to take possession of all or a portion of any such sample.

N. All data, factual information, and documents submitted by Respondents to EPA and the State pursuant to this Order shall be subject to public inspection. Respondents shall not assert a claim of confidentiality regarding any hydrogeological or chemical data, any data submitted in support of a remedial proposal, or any other scientific or engineering data. Respondents may assert a claim of confidentiality as to any process, method, technique, or any description thereof that Respondents claim constitute proprietary or trade secret information developed by Respondents or developed by the contractor or the contractor's subcontractors. In addition, Respondents may assert business confidentiality claims covering part or all of the information provided in connection with this Order in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. §9604(e)(7), and pursuant to 40 C.F.R. §2.203(b) or applicable state law. Any such claim shall be subject to EPA's confidentiality determination procedures and, if determined to be confidential, afforded the protection by EPA provided in 40 C.F.R., Part 2, Subpart B.

O. Respondents shall preserve and retain all records and documents now in their possession or control that relate in any manner to the Site, regardless of any document retention policy to the contrary, for no less than six years after the termination of this Order.

Until termination of this Order, Respondents' shall preserve, and shall instruct their contractors, their contractors' subcontractors, and anyone else acting on Respondents behalf at the Site to preserve (in the form of originals or exact copies, or in the alternative, microfiche of all originals) all records, documents and information of whatever kind, nature or description relating to the performance of the remedy at the Site. Upon the termination of this Order, copies of all such records, documents, and information shall be delivered to the EPA Project Coordinator.

VI. Compliance With Other Laws

Respondents shall comply with all federal, state and local laws and regulations in carrying out the terms of this Order. All hazardous substances removed from the facility must be handled in accordance with the Resource Conservation and Recovery Act of 1976, 42 U.S.C. §6921 et seq., the regulations promulgated under that Act and EPA's Offsite Disposal Policy.

VII. Project Coordinator

EPA has appointed a Project Coordinator for the Site who has the authority vested in the On-Scene Coordinator by 40 C.F.R. Part 300 et seq., including such authority as may be added by amendments to 40 C.F.R. §300, as well as the authority to ensure that this Order is implemented in accordance with all applicable statutes and regulations. If the EPA On-Scene Coordinator and the EPA Project Coordinator are two different individuals, EPA

will make its best efforts to coordinate any direction given the Respondents by the On-Scene Coordinator and EPA Project Coordinator. The Project Coordinator for the Tucson International Airport Superfund Site for the purposes of this Order is:

Daniel D. Opalski
Superfund Programs T-4-1
United States Environmental Protection Agency
Region 9
215 Fremont Street
San Francisco, California 94105
(415) 974-8014

Within four (4) calendar days of the effective date of this Order, Respondents shall designate a Project Coordinator to monitor Respondents' progress in implementing this Order, to coordinate communication between EPA and the Respondents, and to oversee implementation of this Order. EPA and Respondents may change their respective Project Coordinators upon five (5) calendar days written notice.

VIII. Submittals

All submittals and notifications to EPA required by this Order or the plans shall be made to the EPA Project Coordinator.

All approvals and decisions of EPA made regarding the submittals and modifications shall be communicated to Respondents by the Director, Toxics Waste and Management Division or his designee. No informal advice, guidance, suggestions, or comments by EPA regarding reports, plans, specifications, schedules, or any other matter will relieve Respondents of their obligation to obtain formal approvals as required by this Order.

IX. Access

Respondents shall provide EPA employees and other representatives with complete access to the facility at all times. Nothing in this Order limits any access rights that EPA or other agencies may have pursuant to law.

X. Endangerment During Implementation

The Director, Toxics and Waste Management Division, EPA Region 9, may determine that acts or circumstances (whether related to or unrelated to this Order) may endanger human health, welfare or the environment and may order the Respondents to stop further implementation of this Order until the endangerment is abated.

XI. Government Not Liable

The United States Government and its employees and other representatives shall not be liable for any injuries or damages to persons or property resulting from the acts or omissions of Respondents, their employees or other representatives caused by carrying out this Order. For the purposes of this Order, the United States Government is not a party to any contract with the Respondents.

XII. Noncompliance

A. A willful violation or failure or refusal to comply with this Order may subject Respondents to a civil penalty of up to \$25,000 per day in which the violation occurs or failure to comply continues, pursuant to the provisions of Section 106(b)(1) of CERCLA, 42 U.S.C. §9606(b)(1). Failure to comply with this Order without sufficient cause may also subject Respondents to punitive damages of three times the total costs incurred by the United States for site response pursuant to Section 107(c)(3) of CERCLA, 42 U.S.C. §9607(c)(3).

B. EPA may take over the work required by this Order if EPA determines that Respondents are not taking appropriate action. EPA may order additional actions it deems necessary to protect public health, welfare, or the environment.

XIII. Parties Bound

This Order shall apply to and is binding upon the Respondents, their officers, directors, agents, employees, contractors, successors, and assigns.

XIV. Notice of Intent to Comply

By the effective date of this Order, Respondents shall provide written notification to the EPA Director, Toxics and Waste Management Division, of their intent to comply with the terms of this Order. Any Respondent's failure to timely notify EPA of its intent to comply will be construed by EPA as a refusal to comply.

XV. Notice to State

Notice of the issuance of this Order has been given to the State of Arizona. EPA will consult with the Arizona Department of Water Resources and Arizona Department of Environmental Quality, as appropriate, to ensure that the plans submitted by Respondents are consistent with State requirements.

XVI. Effective Date

This Order is effective on Wednesday, February 15, 1989.

IT IS SO ORDERED on this 24th day of January, 1989.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

by:



Jeff Celikson

Director, Toxics and Waste Management Division
EPA, Region 9

Contacts:

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Assistant Regional Counsel

United States Environmental Protection Agency (RC-5)

215 Fremont Street

San Francisco CA 94105

Appendix B

DETERMINATION OF IMMINENT AND SUBSTANTIAL ENDANGERMENT

SITE: Tucson International Airport Area

DOCUMENTS REVIEWED:

My determination is based on the Environmental Protection Agency (EPA) Administrative Record for the Tucson International Airport Area Record of Decision for Groundwater Remediation North of Los Reales Road, signed August 22, 1988.

DETERMINATION:

Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, (CERCLA) 42 U.S.C. § 9606(a), provides that, when the President of the United States determines that there may be an imminent and substantial endangerment to the public health, welfare, or the environment because of an actual or threatened release of a hazardous substance from a facility to the environment, he may issue such Orders as may be necessary to protect public health, welfare or the environment.

The Administrative Record referenced above conclusively demonstrates that hazardous substances have been released to the environment at the Tucson Site. The Administrative Record contains a Feasibility Study (FS) which documents the extent of the release based on the results of groundwater sampling (Section 1.4). This sampling demonstrates that the groundwater at the Site is contaminated with hazardous substances including, but not limited to, volatile organic compounds such as trichloroethylene. The FS also discusses the threat to human health and the environment posed by the release (Section 5.3 and Appendices B and J). The FS has been submitted to the public for comment.

Pursuant to the CERCLA §106 authority delegated to me by the President, through the EPA Administrator, I hereby determine that the Administrative Record, and specifically, the Feasibility Study, demonstrates that an imminent and substantial endangerment to human health, welfare and the environment may exist because of the actual and threatened releases of hazardous substances at the Site.

Dated: this 24th day of January 1989 at San Francisco, California.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

by:



Jeff Zelikson
Director

Toxics and Waste Management Division
EPA, Region 9